ACHIEVEMENTS IN IT DATA, ARCHITECTURE, AND INVESTMENT MANAGEMENT

ISSUE SUMMARY:

The Federal Information Technology Acquisition Reform Act (FITARA), passed in 2014, sought to improve management of Federal IT by centralizing key acquisition and review authorities with Federal Chief Information Officers (CIO). The Environmental Protection Agency (EPA) CIO has invested in data analytics tools and capabilities to shed greater transparency on IT budgeting, investment, and architecture decisions during annual IT Portfolio Reviews (ITPR) held with each Program and Region. These investments have allowed the CIO to consolidate and display live data from a variety of sources, driving meaningful IT management discussions and resulting in:

- Greater transparency on management of and spending in smaller IT systems
- More detailed budget submissions to OMB
- Increased ability to recognize potentially duplicative investments and opportunities to consolidate, modernize, or eliminate systems based on business needs
- Increased visibility into the architecture on IT systems with similar business objectives (e.g., permitting) so that best practices can be leveraged systems in different EPA mission areas
- Visibility into software loaded on IT equipment across the agency and ability to confirm appropriate use

As a result of many of these improvements, EPA's rating on the Congressional [FITARA scorecard](#) improved from a C+ to a B+, where only 9 out of 24 agencies received a score of B+ or higher, and was recognized as one of the Most Improved agencies overall.

UPCOMING MILESTONES:

- **December 31, 2020** – Establish strategic objectives for FY2021 ITPRs

- **December 31, 2020** – Establish and charter Technical Architecture workgroup

- **February 28, 2021** – Update ITPR Dashboard

- **March 31, 2021** – Complete ITPR preparation materials and schedule ITPR sessions

BACKGROUND:

As mentioned above, FITARA sought to improve the management of Federal IT by centralizing key acquisition and review authorities with Federal Chief Information Officers (CIO).   In its implementation plan to OMB, EPA cited several FITARA objectives, including driving down IT maintenance costs, facilitating migration from aging technology platforms, and avoiding development of duplicative IT systems.

Starting in FY2015, the EPA CIO initiated an annual series of ITPRs with programs and regions to discuss IT systems strategies and create action plans going forward. A FITARA team was formed within the CIO organization to plan and organize these portfolio reviews and ensure follow-up on assigned actions.

In FY2018, EPA reviewed its FITARA practices and embarked on "FITARA 2.0" program to find even more effective means of addressing the Agency's FITARA objectives. A few factors drove this change:

- **Greater desire for data-based decision making**. Across the Federal government there has been increasing emphasis on data-based decision making. OMB has been requesting greater granularity in IT budget submissions and has published a Federal Data Strategy. Congress passed legislation such at Foundations for Evidence-Based Policymaking Act of 2018 requiring a Chief Data Officer in every Agency.

- **More mature data retrieval, analytic, and visualization capabilitie**s. In FY2017 EPA documented challenges and opportunities associated with the increasing volumes of environmental data and the multiple storage locations for that data. EPA needed tools to allow staff easier access to data and dashboard capabilities that would support user-friendly visuals for data analysis. During FY 2017-2018, after evaluating several options, EPA acquired the Qlik Sense tool. This tool enabled discussions based on visualization of live data that had previously been inaccessible for ITPR discussions.

- **Revisioning of the Chief Architect role**. During 2018 EPA's Chief Architect role began to shift from technical compliance to consultation. The Chief Architect engaged EPA IT system owners on their business objectives and discussed how system architectures could be reviewed for cost effectiveness, benefits of modernization, and potential reuse of existing EPA computer code and technologies. This expertise allowed ITPRs to engage in deeper technology strategy discussions, both in the meeting and in follow up actions, than had been possible before.

KEY EXTERNAL STAKEHOLDERS:

☒ Congress ☐ Industry ☒ States ☒ Tribes ☐ Media ☐ Other Federal Agency
☐ NGO ☐ Local Government ☐ Other (name of stakeholder) _____

MOVING FORWARD:

Moving forward, EPA will build upon these accomplishments by:

- Establishing strategic objectives for the FY2022 ITPR season and assess data sources and tools needed to achieve those objectives. For example, EPA's Data Management and Analytics Platform expands upon the data visualization capabilities described above to include big data functionalities, machine learning, and geospatial visualization tools.

- Establishing a cross-agency work group to establish a target architecture for programs with similar business needs (e.g., electronic permitting) to minimize system development or modernization costs and facilitate re-use of IT assets.

- Continuing to address legislated Chief Data Officer responsibilities, including and inventory of EPA data assets, identifying key Agency data challenges and priorities, assessing needed data skill sets, and optimizing metadata management.

LEAD OFFICE/REGION: OMS   OTHER KEY OFFICES/REGIONS: REGIONAL AND PROGRAM OFFICES